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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,565	07/17/2003	Jun Koyama	07977-209003 / US3523D1D1	9258
26171	7590	10/18/2005	EXAMINER	
FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			DUONG, KHANH B	
			ART UNIT	PAPER NUMBER
			2822	

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EJC

Office Action Summary	Application No. 10/620,565	Applicant(s) KOYAMA ET AL.	
	Examiner Khanh B. Duong	Art Unit 2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 08/996,357.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This office action is in response to the amendment filed on July 29, 2005.

Accordingly, claims 10, 12, 13, 15, 17, 18, 20, 25, 30 and 35 were amended.

Currently, claims 10-39 remain pending.

Response to Arguments

Applicant's arguments with respect to the amended claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

Claim 25 is objected to because of the following informalities: last line, after “the second wiring”, “interests” should be --intersects--. Appropriate correction is required.

Specification

The amendment filed July 29, 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

Re claim 10, the claim recites “forming a first wiring on a same layer as a source or drain electrode over a substrate” (emphasis added) at line 3. This step is not supported by the original disclosure. For example, FIG. 1A only shows a second wiring 111 being formed on a same layer as a source electrode 109 or drain electrode 110 over a substrate 101.

Re claim 15, the claim recites “forming a plurality of contact holes in the second insulating film” at line 8, and “forming a second wiring over the second insulating film” at lines

9 and 10 (emphasis added). These steps are not supported by the original disclosure. For example, FIG. 1A only shows a plurality of contact holes 108 formed in the first insulating film 107, and a “second” wiring 106 formed over the substrate 101.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 10-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Re claim 10, the claim recites “forming a first wiring on a same layer as a source or drain electrode over a substrate” (emphasis added) at line 3. Such step was not described in the original specification. For example, FIG. 1A only shows a second wiring 111 being formed on a same layer as a source electrode 109 or drain electrode 110 over a substrate 101.

Re claim 15, the claim recites “forming a plurality of contact holes in the second insulating film” at line 8, and “forming a second wiring over the second insulating film” at lines 9 and 10 (emphasis added). These steps were not described in the original specification. For example, FIG. 1A only shows a plurality of contact holes 108 formed in the first insulating film 107, and a “second” wiring 106 formed over the substrate 101.

*** Other claims are rejected as depending on the rejected base claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10, 12-15 and 17-19 are rejected, as best understood, under 35 U.S.C. 102(b) as being anticipated by Takemura et al. (U.S. Patent No. 5,739,549).

Re claims 10, 12, 13, 15, 17 and 18, Takemura et al. ("Takemura") discloses in FIGs. 3A-3F method of manufacturing a semiconductor device (liquid crystal display) comprising: forming a first wiring 311 and a gate electrode 312 (of aluminum) over a substrate; forming a first insulating film 316 (ILD) over the first wiring 311 and the gate electrode 312; forming a plurality of contact holes (occupied by second wiring 318) in the insulating film 316; and forming a second wiring 318 on a same layer 316 as a source or drain electrode 321 over the insulating film 316, wherein the first wiring 311 is in contact with the second wiring 318 via the plurality of contact holes, and wherein the first wiring 311 extends in parallel with the second wiring 318 [see col. 11, lines 36-40 and 64-67].

Re claim 14 and 19, Takemura discloses the semiconductor device is at least one of a liquid crystal display device and an electroluminescence display device [see col. 1, lines 15-20].

Claims 20, 22, 23, 25, 27, 28, 30, 32, 33, 35, 37 and 38 are rejected under 35

U.S.C. 102(b) as being anticipated by Kapoor (U.S. 5,985,746).

Re claims 20, 25, 30 and 35, Kapoor expressly discloses in FIG. 16 a method of manufacturing a semiconductor device comprising: forming a first wiring 2 and a third wiring 4 in a "source line driving circuit" 10 on a same layer (e.g. insulation) as a "gate electrode" 6 over a substrate; forming an insulating film 16 over the first wiring 2, the third wiring 4 and the "gate electrode" 6; forming a plurality of contact holes in the insulating film 16; and forming a second wiring 50 in the "driving circuit" on a same layer as a "source or drain electrode" (right portion 50 in FIG. 16) over the insulating film 16, wherein the first wiring 2 is in contact with the second wiring 50 via the plurality of contact holes, wherein the first wiring 2 extends in parallel with (at least a portion of) the second wiring 50, and wherein the second wiring 50 intersects with the third wiring 4.

Re claims 22, 23, 27, 28, 32, 33, 37 and 38, Kapoor discloses the first wiring 2 and second wiring 50 comprise aluminum [see col. 6, lines 25-30].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takemura in view of Yamazaki et al. (U.S. Patent No. 5,899,547).

Re claims 11 and 16, Takemura fails to disclose the insulating film comprises an organic resin film selected from the group consisting of polyimide, polyamide, polyimideamide, and acrylic.

Yamazaki et al. ("Yamazaki") suggests using an insulating film 39 comprising an organic resin such as polyimide to provide a planar surface [see col. 10, lines 36-38].

Since Takemura and Yamazaki are from the same field of endeavor, the purpose disclosed by Yamazaki would have been recognized in the pertinent prior art of Takemura.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the method of Takemura as suggested by Yamazaki in order to form a planar surface.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the method disclosed by Takemura as suggested by Yamazaki in order to form a planar surface.

Claims 21, 31 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kapoor in view of Yamazaki.

Re claims 21, 31 and 36, Kapoor fails to disclose the insulating film comprises an organic resin film selected from the group consisting of polyimide, polyamide, polyimideamide, and acrylic.

Yamazaki suggests using an insulating film 39 comprising an organic resin such as polyimide to provide a planar surface [see col. 10, lines 36-38].

Since Kapoor and Yamazaki are from the same field of endeavor, the purpose disclosed by Yamazaki would have been recognized in the pertinent prior art of Kapoor.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the method disclosed by Kapoor as suggested by Yamazaki in order to form a planar surface.

Claims 24, 29, 34 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kapoor in view of Takemura.

Re further claims 24, 29, 34 and 39, Kapoor discloses in FIG. 16 a semiconductor device comprising multiple wiring layers previously as described. However, Kapoor fails to disclose such semiconductor device being at least one of a liquid crystal display device and an electroluminescence display device.

Takemura expressly teaches in FIG. 3F the use of multiple wiring layers as electrical interconnections in a liquid crystal display device or an electroluminescence display device [see col. 1, lines 15-20].

Since Kapoor and Takemura are from the same field of endeavor, the purpose disclosed by Takemura would have been recognized in the pertinent prior art of Kapoor.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilize the device of Kapoor in the manner as suggested by Takemura in order to form electrical interconnections in a liquid crystal display device or an electroluminescence display device.

Furthermore, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex Parte Masham*, 2 USPQ F.2d 1647 (1987).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

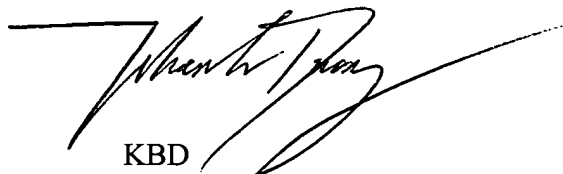
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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh B. Duong whose telephone number is (571) 272-1836. The examiner can normally be reached on 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KBD

